

Cumulative Index 2004

Volume 23

January	ATHLETIC FOOT AND ANKLE INJURIES, pages 1–174
April	ETHICS AND LEGAL ISSUES, pages 175–320
July	RETURN TO PLAY, pages 321–502
October	ELBOW INJURIES IN ATHLETES, pages 503–819

Note: Page numbers of article titles are in **boldface** type.

A

- Achilles enthesopathy, calcaneal spur with, 133
 clinical presentation of, 135–136
 definition of, 131–132
 diagnosis of, 132, 133, 134–136
 treatment of, nonsurgical, 136
 surgical, 137
- Achilles tendinitis, 56
 orthoses in, 163
- Achilles tendinopathy, differential diagnosis of, 133–134
- Achilles tendinosis, insertional, 131
- Achilles tendon, anatomy of, 132–133
 disorders of, 56–60
 diagnosis of, 57–59
 etiologies of, 57
 history taking in, 57–58
 magnetic resonance imaging in, 58–59
 operative management of, 59–60
 physical examination in, 58
 rehabilitation following, 59
 treatment of, goals of, 59
 ultrasound in, 58
 function of, 132–133
- Achilles tendon allograft, 137, 138–139
- Achilles tendonitis, definition of, 131, 132
 insertional. See *Achilles enthesopathy*.
- Acne mechanica, 480
- Acupuncture, 302–303
- Adapted assistive device “3D Foot,” 307
- Adolescent thrower, thrower’s elbow in, 562
- Adolescents, and children, injuries of elbow of, in sports, **581–608**
- Advertising, medical, 181
 of sports medicine, 181
- Amenorrhea, athletic, 291
 primary, 291
- American Academy of Orthopaedic Surgeons, *Code of Medical Ethics and Professionalism for Orthopaedic Surgeons*, 247
 orthopedic surgeons from, code of medical ethics for, 247–249
 Principles of Medical Ethics and Professionalism in Orthopaedic Surgery, 247
- American Medical Association, code of ethics involving sports medicine, 210, 211
 principles of medical ethics of, 246–247
- Amnesia, as symptom of concussion, 423–424
- Analgesics, and injections, 230–233
 guidelines for use of, 178
- Ancient Olympic athletes, meat in diet of, 201
- Ancient world, organized athletics in, 197–204
- Androstenedione, 274
- Anemia, iron deficiency, 292
- Anesthetic injections, 231, 232
- Angiofibroblastic tenosynovitis, 676
- Ankle, and foot, tendinopathies of, 54–62
 injury(ies) of, acute, acute care in, 87–88
 and chronic lateral instability, **1–18**

- diagnosis of, diagnostic studies in, 4
 - history taking in, 3
 - physical examination in, 3-4
 - differential diagnosis of, 4-5
 - grades of, 6
 - immobilization and weight bearing assistance following, 88
 - prevention of, 6
 - and foot injuries, arthroscopy for, 33-51
 - balance training following, 89
 - functional training following, 89-90
 - injury history in, 20, 21
 - physical examination in, 21
 - strength training following, 88
 - injury(ies) to, of female athletes, 283
 - instability of, chronic, arthroscopic repair of, 45-47
 - results of, 47
 - technique of, 46-47
 - thermal-assisted capsular modification of, 45-46
 - lateral instability of, acute ankle injury and, 1-18
 - chronic, anterior drawer test in, 9-10
 - associated injuries in, 10-11, 12
 - Brostrom-Gould anatomic lateral ligament repair in, 13-15
 - Chrisman-Snook reconstruction in, 16-17
 - Gould procedure modification in, 15-16
 - modified Brostrom-Evans procedure in, 15-16
 - nonoperative management in, 11
 - operative management in, 13
 - physical examination in, 9
 - presentation of, 8-9
 - proprioception defect in, 10
 - talar tilt test in, 10
 - lateral ligament injury of, acute, 4-5
 - functional rehabilitation of, biological background of, 7
 - treatment of, 6-8
 - physical therapy modalities in, 8
 - proprioception training in, 8
 - surgical, 8
 - ligaments of, anatomy and biomechanics of, 1
 - mechanism of injury to, 2-3
 - pain in, and peroneal tendon pathology, 19-32
 - differential diagnosis of, 22
 - posterior, arthroscopy of, pathology requiring, 42
 - results of, 42-43
 - technique of, 42
 - sprain(s) of, incidence of, 1
 - rehabilitation following, 87
- Ankle joint, anatomy of, 19-21
- Ankle supports, compared, 84
 - functional testing of, 87
 - gait analysis and, 83-84
 - ground reaction forces, 86
 - improved stability due to, 81
 - inversion velocity and, 86
 - kinesthesia assessment and, 84-85
 - neuromuscular response to, 85-86
 - non-weight bearing, 82
 - postexercise, 84
 - postural control and balance and, 86-87
 - range of motion and, 81-82
 - sensorimotor changes and, 84
 - trap-door platforms and, 82-83
- Anorexia nervosa, in female athlete triad, 290-291
- Anterior ankle impingement exostoses, 41-42
- Anterior cruciate ligament, reconstruction of, biology of, 395-396
 - bracing in, 397-398
 - early postoperative recovery after, 395-398
 - functional testing following, 403
 - functional training following, 402-403
 - intermediate postoperative phase and, 398-399
 - intraoperative factors and, 395
 - knee stability following, 398-399
 - late postoperative phase of, 399-402
 - pain control in, 396
 - phase concept for, 393-394
 - preoperative phase of, 394
 - range of motion following, 396-397
 - return to play after, 393-406
 - weight bearing following, 397
- Anterior drawer test, in chronic lateral instability of ankle, 9-10
- Anterior interosseous syndrome, in throwers, 733
- treatment of, 733
- Anterior tibiotalar impingement syndrome, 24-25

- Antifungal agents, oral, 478-479
- Aorta, coarctation of, 462-463
rupture and dissection of, 462-463
- Aortic stenosis, valvular, 463
- Apophysitis, medial epicondylar, 585-587
treatment of, 586-587
- Armstrong, Lance, 217
- Arrhythmia, and conduction abnormalities, 464
- Arrhythmogenic right ventricular dysplasia, 458
diagnosis of, 459-460
- Arthritis, radiocapitellar, 743-746
rheumatoid, elbow problems in, 751
- Arthrolysis, arthroscopic, rehabilitation follow-
ing, 797
- Arthroscopy, for athletic foot and ankle injuries,
33-51
of great toe, 33-36
of posterior ankle, 42-43
subtalar. *See Subtalar arthroscopy.*
- Athlete(s), autonomy of, ethical principles
and, 177
cardiovascular disease in, 453-469
competitive impulse of, 208
duty of physician to, 176
electrocardiographic patterns in, 454, 455
ethical decision-making and, 176
ethics and, sports as more than game but
less than war, 215-225
external events dominating life of,
186-187
female, aging, 292
injury rates in, 280-283
special concerns of, 279-296
goal of, in conflict with usual medical
goals, 178-179
heart of, 453-455
and type of exercise, 454
discussion of, in late nineteenth
century, 205
improvement in athletic performance
and, 209
informed consent and, 177-178
injured, rehabilitation of, therapeutic
modality, 297-311
-physician relationship, as unique,
176-177
influences on, 175
pregnant, 293-294
privacy issues of, 177
professional. *See Professional athlete(s).*
sex differences in, 279-280
and injury rates, 281
short-term gain versus long-term risk
of, 178
sudden death in, 455-456
cardiovascular causes of, 456-465
teenage, injury as threat to, 186
- Athletic behavior, moral status of, concepts
of, 216
- Athletic performance, improvement in, athletes
and, 209
- Athleticism, debate over, in late 19th
century, 205
- Athletics, organized, in ancient Greece, 197-201
in ancient world, 197-204
in modern world, 204-213
-
- B**
- Baker, W., 208
- Balance training, following ankle injuries, 89
- Bankart lesion, 337
- Barkley, Charles, 222-223
- Barotrauma, pneumothorax and, classification
of, 444
- Baseball, pitching in, biomechanics of elbow
during, 517-521
throwing motions in, biomechanics of
elbow during, 522
- Baseball players, interval throwing program
for, 780-783
- Bassetts ligament, 24-25
- Behaviors in sport, rule and ethos driven
categories of, 220
- Berlioux, Monique, on Olympic sports, 207
- Beta-hydroxy-beta-methylbutyrate, 274-275
- Biceps tendon, anatomy and biomechanics of,
705-706
and triceps tendon, injuries of, 707-722
distal, ruptures of, rehabilitation
following, 363
surgical management in, 362
ruptures of, 705-715
chronic, treatment of, 712
classification of, 708-709
clinical presentation and diagnosis
of, 707, 708
etiology and pathophysiology of,
706-707
partial, treatment of, 711-712
surgery in, 709-711
complications of, 714-715
indications for, 709
postoperative care
following, 712
results of, 713-714

- Bioethics, in large medical corporations, 244-245
- Biofeedback, 304-305
- Biofeedback device, console, 304
portable, 305
- Blood doping, 217-218
- Bone scan, dynamic, in chronic exertional compartment syndrome, 71
- Bone scintigraphy, in Lisfranc joint injury, 106
- Bouton, Jim, 189
- Bracing, and rehabilitation, new methods of, 81-93
- Brain injury, mild, medical clearance after, informed consent and, 189-190
- Brostrom-Evans procedure, modified, in chronic lateral instability of ankle, 15-16
- Brostrom-Gould anatomic lateral ligament repair, in chronic lateral instability of ankle, 13-15
- Brugada syndrome, 464
- Bulimia nervosa, in female athlete triad, 291
- Bunion deformity, orthoses in, 159-160
- Bursitis, cubital, and biceps tendinitis, 576 of elbow, 755-757
retrocalcaneal, orthoses in, 163
- Business corporations, chief ethics officer in, 244
- C**
- Calcaneofibular ligament, 2
- Calcaneal prominence resection, endoscopic, 43-44
- Calcaneus, stress fractures of, 67
- Capitulum, osteochondral defect of, 573
osteochondral lesion of, 568
osteochondritis of. See *Osteochondritis dissecans, capitellar*.
- Cardiomyopathy, dilated, 460
hypertrophic, 456-458
sudden death in, risk factors for, 458
- Cardiovascular disease, in athletes, 453-469
- Chest, blunt trauma to, differential diagnosis of, 447, 448
thoracic injuries after, predictors of, 447-448
- Chief ethics officer, general mission of, 251
goals of, patient, physician, and employee, 252
in business corporations, 244
job description of, 251-252
role of, in education, 245-246
in physician's office, 243-253
specific ethical issues and, 252
unique aspect of, 244
- Child(ren), adults and, dislocations of elbow in, 609-627
and adolescents, injuries of elbow of, in sports, 581-608
- Chondrocyte implantation, autologous, 384-385
- Chondromatosis, synovial, 754
treatment of, 755
- Circle of Horii, 610
- Cognitive testing, on-field, concussion and, 424, 425
- Collateral ligament, lateral, mechanism of injury to, 630-631
medial, rupture of, 574
ulnar. See *Ulnar collateral ligament*.
- Collateral ligament complex, lateral, 507-508
medial, 506-507
- Compartment syndrome, exertional, chronic, diagnostic criteria for, 70-71
dynamic bone scan in, 71
definition of, 68
diagnosis of, 69
intracompartmental pressure during exercise in, 69
measurement of intramuscular pressures in, 70
neurologic and vascular examination in, 69
presenting complaints in, 69
treatment of, 71-72
- Competitive sports, participation in, recommendations for, 270-271
- Complex regional pain syndrome, 143-153
anatomic/physiologic considerations in, 144-145
autonomic dysfunction in, 146-147, 148
clinical definition of, 145-147
cold stress testing in, 146, 147
drugs to treat, 150, 151
management alternatives in, 150-152
microvascular perfusion associated with, 149-150
pain manifestations in, 146
physiologic staging in, 147
surgery in, 151-152

- sympathetically independent, 143
 sympathetically maintained, 143
 versus sympathetically independent, 147-150
 trophic changes in, 146
 vital capillaroscopy in, 146, 148
- Comprehension, informed consent and, 188
- Compression neuropathies, in thrower's elbow, 721, 722
 in throwing elbow, 725-726
- Computed tomography, of elbow, 567-568, 569
 of lumbar spine, 370, 371
- Concussion, age-related responses to, 429-430
 computer-based neuropsychologic testing in, 432-433
 clinical model for, 433-435
 definition of, 419-420
 functional magnetic resonance imaging in, 435-436
 grading scales, 427
 multiple, cumulative effects of, 430-431
 neuropsychologic testing and, 431-432
 on-field and sideline management of, 421
 on-field cognitive testing and, 424, 425
 on-field evaluation of mental status, 423
 on-field signs and symptoms of, 421-423
 outcome following, research on predictors of, 424
 pathophysiology of, 420-421
 return to play following, guidelines for, 426-429
 individual factors determining, 429-431
 University of Pittsburgh Medical Center protocol for, 437
 sports-related, return to play following, 419-439
 symptom self-report inventory in, 434
- Confidentiality, physician-patient (player), 233-235
- Confusion, as symptom of concussion, 423, 424
- Connolly, Harold, on maximizing of athletic performance, 209
- Consent, constellation of, informed consent and, 189
- Coronary artery(ies), aberrancies and anomalies of, 461
 disease of, 462
 tunneled, 461-462
- Coronoid process, fracture of, 572
- Cost awareness, in sports medicine care, 180
- Coughlin, Robert, 206
- Creatine, 272-273
- Cryotherapy, 297-298
- Cuboid, stress fractures of, 67
- Cuneiform bones, stress fractures of, 67
- Cutaneous nerve, lateral antebrachial, compression of, 737-738
 site of, 737-738
-
- D**
- Death, risk of, informed consent and, 191-192
- Dehydroepiandrosterone, 273-274
- Delayed onset muscle soreness, exercise-induced, 297, 299
- Dexamethasone, iontophoresis-delivered, 302
- Doctor-patient relationship, versus doctor-team relationship, 229-230
- Doctor-team relationship, versus doctor-patient relationship, 229-230
- Doping, 210
- Dorsiflexion splints, in plantar fasciitis, 126
- Drugs, banned, 269
 illicit, adverse cardiovascular effects of, 464-465
 use of, team physician and, 179-180
 in sports, 269-275
- duBois-Reymond, René, 206
- Dukes, Clement, 205
- Dyskinesia, scapular, demonstration of, 548
-
- E**
- Eating, disordered, in female athlete, 290-291
- Elbow, active stabilizers of, 513-514
 anatomy of, 503-510, 551-552, 607-609, 723-725
 and biomechanics of, 663-665, 668-670
 stress fractures of olecranon and, 668-670
 and structural biomechanics of, 503-517
 basic, and kinematics of, 530-531
 arthroscopy of, postoperative rehabilitative protocol for, 766-767
 articular contribution/bony stability of, 510-511

- articulations in, 505-506
- biomechanics of, 510-514
 - and development of, in young throwing athlete, **531-544**
 - during baseball pitching, 517-521
 - arm acceleration, 520-521
 - arm cocking, 520
 - arm deceleration, 521
 - follow-through, 521
 - stride phase, 519
 - windup, 519
 - during nonthrowing sports, golf, 525-526
 - tennis, 524-525
 - during throwing motions, in
 - baseball, 522
 - in football passing, 522-523
 - in javelin throwing, 523
 - in windmill softball pitching, 523-524
 - in sports, **519-530**
- bursitis of, 755-757
- calcifications and ossifications around, 753-755
- capsuloligamentous contribution of, 511-513
- capsuloligamentous restraints of, 506-509
- computed tomography of, 567-568, 569
- cortical fracture of, 565, 566
- dislocation(s) of, classification of, 614
 - clinical presentation of, 614-615
 - complex, in adult, 616
 - complications of, 620-622
 - epidemiology of, 614
 - in adult(s), and in children, **609-627**
 - treatment of, 615-616
 - in children, treatment of, 616-619
 - in female athletes, 287, 288
 - investigations in, 615
 - pathomechanics of, 609-613
 - prognosis for, 622-624
 - reduction of, rehabilitation following, 619-620
 - simple posterior, in adult, 615-616
- forces acting on, 543-544, 663-665
- function and dysfunction of, in sports, kinetic chain contributions to, **545-552**
- imaging of, recent advances in radiographic and special studies in, **567-580**
- injury(ies) to, as result of maladaptations, 549
 - in female athletes, 286, 287
 - in juveniles and adolescents in sports, **581-608**
 - in skeletally immature throwers, 537-539
 - nonoperative rehabilitation program for, 764-765
 - throwing and, 353-354, 517-518, 520-521, 522-524
- lateral, effects of repetitive throwing on, 646-647
- long-axis rotation and, 545, 546
- loose bodies about, 753-755
 - etiologies of, 754
- magnetic resonance imaging of, 571-577
- medial, anatomy of, 693
 - biomechanics of, 692
 - effects of repetitive throwing on, 645-646
 - pain in, evaluation of, 693-694
- miscellaneous conditions about, in athletes, **743-763**
- musculature and neurovascular structures of, 509-510
- ossification centers of, 505
- osteoarthritis of, 743
- osteology of, 503-505
- painful snapping in, 742
- passive stabilizers of, 510-513
- posterior, effects of repetitive throwing on, 647
- posterolateral rotatory instability of. *See Posterolateral rotatory instability of elbow.*
- problems of, in rheumatoid arthritis, 751
- radiography of, routine, 565-566
- scintigraphy of, 566-567
- secondary ossification centers about, development of, 580
- skeletal growth at, 580
- stability of, structures providing, 693
- surgery of, goal of, 354
 - rehabilitation following, 354
 - return to sport following, **353-366**
- symptoms in, in throwing athlete, 547
- thrower's. *See Thrower's elbow.*
- throwing, acceleration phase of throwing and, 726
 - biomechanics of, 725-727
 - nerve injuries in, **723-742**
 - causes of, 721-723
 - compression, 725-726
 - compression and, 724
 - electrophysiologic studies in, 723
 - history taking in, 723
 - to median nerve, 730-734
 - to radial nerve, 734-737
 - to ulnar nerve, 727-730
 - ultrasound of, 568-571
 - vascular network supplying, 580
- Electrical neuromuscular stimulation console, 300

- Electrographic patterns, in athletes, 454, 455
- Endoscopic calcaneal prominence resection, 43-44
- Eosinophilia-myalgia syndrome, 275
- Epicondylar apophysitis, medial, 585-587
treatment of, 586-587
- Epicondyle, medial, avulsion fractures of, 581-585
management of, 583-584
- Epicondylitis, 360-361
in racquet sports, prevention of
recurrence of, 361
lateral, 524-525, 570, 571, **677-691**
arthroscopic debridement of, 361
arthroscopic lateral release in, 683-685
history and physical examination
in, 676-678
nonoperative treatment of, 678-680
open surgical treatment of, 681-683
operative treatment of, 680-686
percutaneous release in, 685-686
revision surgery in, 686
surgery for, 360-361
medial, diagnosis and treatment of, **693-705**
diagnosis of, 694-695
epidemiology and etiology of, 691-692
pathophysiology of, 694
postoperative management of, 700
rehabilitation protocol in, 786-787
surgery for, 360
treatment of, nonsurgical, 695-698, 783-785
surgical, 698-701
- Epstein-Barr virus infection, clinical manifestations of, 484-486
disorders associated with, 483
epidemiology of, 484
transmission and pathogenesis of, 483-484
- Ethics, and athlete, sports as more than game but less than war, **215-225**
and law, 175-176
and professional team physician, **227-241**
codes of, and demands of sports and demands of health, 210
guidelines for, 175-176
in sports medicine, history of, competing demands of sport and health, **195-214**
medical. See *Medical ethics*.
of sports medicine, **175-182**

- Ethics officer, chief. See *Chief ethics officer*.
- Ethics Officer Association, 245
- Exercise(s), during pregnancy, 293-294
exercise prescription and, 306-307
stretching, in plantar fasciitis, 126
"system of", and doctrine of moderation, 205
type of, heart of athlete and, 454
weightbearing, 292

F

- Fair play, as contract, 219
as respect for game, 219-220
- Fasciotomy, posterior, in shin splints, 72-73
- Fatigue, as symptom of concussion, 423
- Fédération International de Médecine du Sport, 176, 207, 208
code of ethics in sports medicine and, 211, 212, 249-251
- Female athlete. See *Athlete(s), female*.
- Female athlete triad, 289-292
- Fibula, stress fractures of, 66
- Flatfoot deformity, 60
- Foot (Feet), and ankle, tendinopathies of, 54-62
- Foot orthoses. See *Orthoses*.
- Football, passing of, biomechanics of elbow during, 522-523
- Footballer's ankle, 41-42
- Forefoot, orthoses for, 158-160
- Fouls, intentional, 218
- Fracture(s), avulsion, of medial epicondyle, 581-585
management of, 583-584
cortical, of elbow, 565, 566
of coronoid process, 572
- Functional training, following ankle injuries, 89-90
- Fungal infections, superficial, 478-479
topical agents for, 479
- Furunculosis, 480

G

- Galen, Olympic athletes and, 199, 200-201, 203-204
- Gerenu, Egyptian wrestler, 202

- Glenohumeral joint, anatomy of, 335, 336
 dislocation of, incidence of, 336-337
 mechanism of, 337
- Glomerulonephritis, poststreptococcal, 480
- Golf, biomechanics of elbow during, 525-526
- Golfer's elbow. See *Epicondylitis, medial*.
- Great toe, 112-118
 anatomy of, 113-114
 arthroscopic anatomy of, and portals of, 34-35
 arthroscopy of, 33-36
 equipment for, 35-36
 indications for, 33-34
 postoperative care and rehabilitation in, 36
 results of, 36
 technique of, 35
 injury of, clinical diagnosis of, 115
 imaging in, 115, 116, 117
 mechanism of, 114
 return to play following, 116-117
 risk factors for, 115
 treatment of, 116
- Greece, ancient, Olympic Games in, 197, 198

H

- Haglund's deformity, 131, 133-134
 orthoses in, 163
- Hallux rigidus, orthoses in, 158-159
- Hand and wrist, injuries to, in female athletes, 287-288
- Harding, Tonya, 216
- Headache, as symptom of concussion, 421-422
- Heart, of athlete, 453-455
 discussion of, in late 19th century, 205
- Heel pain, 121-142
 development of, risk factors for, 124-125
- Hemarthrosis, in hemophilia, 749-751
- Hemophilia, 749-751
- Herpes gladiatorum, and other skin diseases, 471-482
 characteristics of, 472
 complications of, 473
 epidemiology of, 471-472
 in nonwrestlers, 478
 prophylactic management of, 474
 return to play/participation following, 474-478
- transmission of, 472-473
 treatment of, 473
- High-volt pulsed current, for edema control, 301-302
- Hindfoot, ligamentous anatomy of, 96
- Hippocrates, *Aphorisms* of, 199-200
 Olympic athletes and, 203-204
- Holyfield, Evander, 215
- Homer, *Iliad* of, 197-198
- Hypertrophic cardiomyopathy, 456-458
 sudden death in, risk factors for, 458

I

- Impetigo, 479-480
- Impingement exostoses, anterior ankle, 41-42
- Infectious mononucleosis, 483-495
 complications and persisting symptoms of, 488-490, 492
 diagnosis of, 487
 return to sports following, 490-492
 treatment of, 488
- Informed consent, as voluntary, 184
 athlete and, 177-178
 discussions of, 232
 external barriers to, 188-191
 in sports medicine, 183-193
 internal barriers to, 185-187
 medical clearance after mild brain injury and, 189-190
 patient understanding and, 184
 procedure-based risks and, 183
 provider-based risks and, 183
 risk of death and, 191-192
 risk of sudden catastrophic injury and, 191-192
- Injury(ies), as threat to professional athlete, 186
 in sports, definition of, 256
 demographics of, 258-259
 epidemiology of, 255-259
 incidence of, 257
 long-term consequences of, 179
 rates of, 257-258
 reporting of, 256-257
 risk of, 257
 severity of, 258
 sudden catastrophic, risk of, informed consent and, 191-192
- International Sports Medicine Federation, 176, 207, 208
 code of ethics in sports medicine and, 211, 212, 249-251

Interosseous syndrome, posterior, and radial tunnel syndrome, compared, 735-736

Intra-articular plica syndrome, 741-743
diagnosis of, 743
differential diagnosis of, 742-743
symptoms of, 742

Intracompartmental Pressure Monitor, Stryker, 70

Iontophoresis, 302
in plantar fasciitis, 126

Iron deficiency anemia, 292

Isokinetic rehabilitation, conventional, 306

J

Javelin throwing, biomechanics of elbow during, 523

K

Kerrigan, Nancy, 216

Ketorolac, 231

Kinetic chain factors, clinical implications of,
in lack of symptoms, 549
in overt injury, 547-549
function and dysfunction of elbow in sports and, 545-552
research on, 544-547

Kinetic chain functional exercise, protected closed, 307

Knee, anterior, pain in, differential diagnosis of, 285
cartilaginous injury of, return to play following, 383
dynamics of landing and, 283, 284, 286
injuries to, of female athletes, 283-286
injury rates in basketball, 281, 282
meniscus of, and chondral injuries to, surgical treatment of, return to play following, 379-391
arthroscopic surgery of, return to play following, 382-383
healing of, basic science of, 380-381
microfracture of, rehabilitation following, 383-384
periosteal grafting of, rehabilitation following, 384
surgery of, limb performance following, recovery of, 386-387
return to sport following, criteria for, 387

L

La Cava, Giuseppe, 207-208

Law, ethics and, 175-176

Leclerc, S., on boxing and health in sports community, 212, 213

Left-ventricular hypertrophy, idiopathic, 460

Leg, major compartments in, 69-70

Liotard, Philippe, on codes of ethics for physicians, 211

Lisfranc joint, anatomy of, 103-104
injury(ies) of, 103-112
bone scintigraphy in, 106
classification of, 107-109
clinical diagnosis of, 107-109
imaging of, 106-107
magnetic resonance imaging in, 107
return to play following, 111-112
treatment of, 109-110, 111, 112
sprain of, mechanism of, 105-106

Little League elbow, nonoperative rehabilitation in, 791

Long-axis rotation, elbow and, 545, 546

Long-QT syndrome, congenital, 464

Low back pain, 367, 368

Lower extremity(ies), dermatomes of, 369, 370
injuries to, in female athletes, 283-286
malalignment of, normal and miserable, 280

L-tryptophan, 275

Lucian, *Anacharsis: On Physical Exercises*, 202-203

Lumbar disc, herniation of, 373-375

Lumbar spine, anatomy and biomechanics of, 368
conditions of, 371-377
and surgeries of, return to play after, 367-378
history and physical examination in, 368-369
imaging studies of, 369-371
strain of, 371-373

Lymph node enlargement, in infectious mononucleosis, 486

M

Magnetic field therapy, 303-304

Magnetic resonance imaging, functional, in concussion, 435-436
in Achilles tendon disorders, 58-59

- in dysfunction of posterior tibial tendon, 61
 - in instability of subtalar joint, 100
 - in Lisfranc joint injury, 107
 - in stress fractures, 64-65
 - of elbow, 571-577
 - of lumbar spine, 370-371
 - of rotator cuff, 325
 - Mallwitz, Arthur, 206
 - Marfan's syndrome, 462
 - Massage, lower extremity, 305-306
 - Mayo valgus stress test, to detect ulnar collateral ligament insufficiency, 651, 652
 - Meat, in diet of ancient Olympic athletes, 201
 - "Media medical care," 180
 - Medial collateral ligament, rupture of, 574
 - Medial malleolus, stress fractures of, 66
 - Medial tibial stress syndrome. *See Shin splints.*
 - Median nerve, entrapment of, in wrist, 724
 - injuries of, 730-734
 - compression of, sites of, 730-731
 - evaluation of, 731-733
 - treatment of, 733-734
 - Medical aspects of sports, 255-277
 - Medical corporations, large, bioethics in, 244-245
 - Medical decision-making, professional team physician and, 237-239
 - Medical ethics, autonomy and, 184-185
 - code(s) of, 245-246
 - and professionalism, for orthopedic surgeons, 247
 - principles of, of American Medical Association, 246-247
 - Meniscoid lesions, 24, 25
 - Menstrual irregularities, in female triad, 291
 - Metatarsal(s), second, elongated, orthoses
 - in, 159
 - stress fracture(s) of, 67-68
 - orthoses in, 160
 - Metatarsophalangeal joint. *See Great toe.*
 - Microfracture technique, in osteochondral lesions of talus, 44-45
 - Midfoot, and rearfoot, orthoses in, 160-163
 - Milking maneuver, to produce valgus stress, 650-651
 - Mirkin, Gabe, on attitude of athletes, 209-210
 - Miserable malalignment syndrome, 280
 - Mitral valve prolapse, 463
 - Modern world, organized athletics in, 204-213
 - Moral subjectivism, 216
 - Morton's neuroma, orthoses in, 160
 - Morton's toe, orthoses in, 159
 - Mosaicplasty, and osteochondral autologous transfer system, in osteochondral lesions of talus, 45
 - Musculocutaneous nerves, injuries of, 737-738
 - Myocardial bridging, 461-462
 - Myocarditis, 460-461
-
- N**
-
- Navicular, stress fractures of, 67
 - Nerve entrapment, in painful heel syndrome, 123-124
 - Nerve entrapment syndromes, 25-26
 - Nerves. *See also specific nerves.*
 - injuries of, in throwing elbow, 723-742
 - Neuroma, interdigital, orthoses in, 160
 - Neuropraxia, of spinal cord, 407
 - Nucleus pulposus, herniated, 373-375
 - Nutritional supplements, 269-272
-
- O**
-
- Olecranon, apophyseal injury of, 587-589, 590
 - impingement of, in osteoarthritis, 574
 - stress fractures of, anatomy and biomechanics of elbow and, 668-670
 - stress injury of, and stress fractures of, 359
 - valgus extension overload syndrome and, 665-676
 - Olecranon bursa, acute bursitis of, 755
 - swelling of, 756
 - Olecranon bursitis, treatment of, 756-757
 - Olecranon fossa, in osteoarthritis, 574
 - Olecranon osteophytes, arthroscopic removal of, 667
 - Oligomenorrhea, 291

- Olympic Games, in ancient Greece, 197, 198
- Olympic Medical Archives*, 207
- Olympic team physician, in early 20th century, 206
- One-leg stability assessment, 547, 548
- O'Neal, Shaquille, 218
- Orthopedic surgeons, code of medical ethics and professionalism for, 247
- Orthoses, action of, alternative mechanisms of, 156-157
and sports-related injuries, 157-163
contraindications to, 156
evidence for, 155-156
for forefoot, 158-160
in plantar fasciitis, 125, 126
in rehabilitation, new options for, 155-165
shoes and, 157
- Osteoarthritis, impingement of olecranon in, 574
of elbow, 743
olecranon fossa in, 574
- Osteoarthrosis, 123
- Osteochondral allograft, fresh, rehabilitation following, 386
- Osteochondral autogenous transfer, rehabilitation following, 385-386
- Osteochondral autologous transfer system, and mosaicplasty, in osteochondral lesions of talus, 45
- Osteochondral defect, of capitellum, 573
- Osteochondral lesion(s), of capitellum, 573
of talus, 21-23
staging system for, 22
- Osteochondritis dissecans, 591, 593-602
capitellar, classification of lesions of, 597-598
clinical presentation of, 594
diagnosis of, 594-597
etiology of, 593-594
natural history of, 597
treatment of, 598-600
follow-up of, 600-602
nonoperative rehabilitation in, 790-791
- Osteophytes, olecranon, arthroscopic removal of, 667
rehabilitation following, 793-794
- Osteoporosis, 291-292
- Ottawa ankle rules, 4
- Overhead athlete, ulnar collateral ligament injury in, 643-663
- Overtraining syndrome, 53
- Overuse injuries, 53-79, 155
etiology of, 53-54
"overtraining syndrome" and, 53
sports-acquired deficiencies as, 54
- Overuse syndromes, and osteochondral lesions of talus, 44
-
- ## P
-
- Pain syndrome, complex regional. See *Complex regional pain syndrome*.
- Painful heel syndrome, nerve entrapment in, 123-124
- Palmaris longus tendon, thrower's elbow and, 561, 562
- Panner's disease, 591-593
management in, 592-593
symptoms of, 591
- Paratenonitis, with tendinosis, 56
- Pausanias, *Description of Greece*, 199
- Perfusion imaging, technetium-99m methoxyisobutyl isonitrile, in exertional compartment syndrome, 71
- Peroneal tendinitis, orthoses in, 161
- Peroneal tendinopathies, 61-62
- Peroneal tendon(s), dislocation of, 27-28
pathology of, 26-28
and ankle pain, 19-32
rupture of, 26
tears of, 27
- Peroneus brevis, in subtalar joint repair, 102
rupture of, 62
- Peroneus longus, rupture of, 62
tendinopathy of, 62
- Pertthes-Bankart lesion, 337
- Pes caves foot, orthoses in, 160
- Pes planus foot, orthoses in, 160-161
- Pharyngitis, in infectious mononucleosis, 485-486
- Philostratus, 198-199
Gymnastic of, 202
on painting of Arrichion, 203
- Phonophoresis, 299

- Physical examination, preparticipation, 259-269
 and history, 262-267
 disqualifying conditions and, 267-269
 for determination of clearance status, 267
 format, timing, and frequency of, 261-262
 objectives of, 260-261
 physical part of, form for recording, 263, 266
- Physician(s), duty to athlete, 176
 -patient (player) confidentiality, 233-235
 sports medicine, coercion of, 209
 competitive impulse of athletes and, 208
 divided loyalties and, 209
 team. See Professional team physician.; Team physician(s)
- Physician's office, role of chief ethics officer in, 243-253
- Pipe, Andrew, on responsibilities of sports medicine physician, 209, 211, 213
- Plantar fascia, anatomy of, 121-122
 function of, 122
 pathophysiology of, 122
 release of, in plantar fasciitis, 129-131
- Plantar fasciitis, 121-131
 clinical presentation of, 123
 definition of, 122
 diagnosis of, 123
 differential diagnosis of, 122-123
 orthoses in, 161-162
 treatment of, nonsurgical, 125-128
 surgical, 128-131
- Pneumomediastinum, classic presentation of, 446
 definition of, 443-446
 evaluation for, 446-448
 in athletes, 445-446
 pneumothorax and, 441-452
 return to play following, 449
- Pneumothorax, air travel following, 450
 and barotrauma, classification of, 444
 and pneumomediastinum, 441-452
 classic presentation of, 446
 definition of, 441
 evaluation for, 446-448
 iatrogenic, causes of, 442
 in athletes, 443-446
 presentations causing suspicion of, 450
 recurrence of, 449
 return to play following, 449-450
 spontaneous, causes of, 441-442
 tension, symptoms of, 443
 traumatic, causes of, 442
 treatment of, 448
- Postconcussion syndrome, 421
- Posterolateral rotatory instability of elbow, 629-642
 anatomy of elbow and, 628-630
 history of, 627-628
 mechanism of injury to elbow and, 630-631
 pathoanatomy of elbow and, 630
 presentation of, 631-634
 reconstruction of lateral ulnar collateral ligament in, 634-638
 postoperative care following, 638
 results of, 639
- Pregnancy, exercise during, 293-294
- Preparticipation evaluation, 229
- Preparticipation physical examination. See Physical examination, preparticipation.
- Procedure-based risks, informed consent and, 183
- Professional athlete(s), injury as threat to, 186
 job security and, 237
- Professional team physician, American College of Sports Medicine and, 228-229
 American Medical Association and, 228
 changing role of, 228
 contractual working relationship of, 228
 entrepreneurial endeavors of, 239-240
 ethics and, 227-241
 historical perspective on, 228-229
 judgment of, and vulnerability to litigation, 238
 medical decision-making and, 237-239
 pressure on, ethics of medical decisions and, 237
 World Medical Association and, 228
- Professional Team Physicians (PTP), 239-240
- Prokop, Ludwig, on doping, 210
 on health and ethical limits, 208, 209, 211
- Proprioception training, in acute lateral ligament injury of ankle, 8
- Provider-based risks, informed consent and, 183
- Pulsed electrical stimulation, 300-301
- Pulsed electromagnetic fields, 303
- Pulsed magnetic fields, 303
- Q**
- Quadriplegia, transient, 407-417
 causes of, 407-408
 clinical presentation of, 407

- evaluation after, 410
 return-to-play following, absolute contraindications to, 414
 criteria for, 411-414
 risk stratification for, 414-416
- R**
- Racism, immorality of, 222
- Radial head, congenital dislocation of, 746-747
 excision of, in radiocapitellar arthritis, 744
 spur of, 567
- Radial head implants, in radiocapitellar arthritis, 745-746
- Radial nerve, anatomy of, 724-725, 734, 735
 compression of, sites of, 734-735
 treatment of, 736-737
 injuries of, 734-737
 evaluation of, 735-736
- Radial tunnel syndrome, and posterior interosseous syndrome, compared, 735-736
- Radiocapitellar arthritis, 743-746
 radial head excision in, 744
 radial head implants in, 745-746
 treatment of, 743-746
- Radiography, of elbow, routine, 565-566
 of lumbar spine, 370, 371
 recent advances in, for imaging of elbow, 567-580
- Radio-ulnar synostosis, 747-749
 surgery in, 748-749
 types of, 748
- Reflex sympathetic dystrophy. *See Complex regional pain syndrome.*
- Rehabilitation, bracing and, new methods of, 81-93
 of injured athlete, therapeutic modality, 297-311
- Retrocalcaneal bursitis, orthoses in, 163
- Rheumatoid arthritis, elbow problems in, 751
- Richardson, Benjamin Ward, 205-206
- Risk, calculation of, informed consent and, 189
- Robinson, Jackie, 222
- Rotator cuff, impingement of, 321-322
 injuries of, and superior labrum anterior posterior lesions, return to play following, 321-334
 in overhead sports participants, 323, 324
 mechanisms of, 321
 return to play after, 323-328
 factors influencing, 326-327
 MR imaging of, 325
 surgery of, return to sports after, 327, 328
 tears of, 322-323
 classification of, 326
 grading of, 322
 in younger athletes, 323
- Rotator cuff strengthening program, 324-325
- Rotator cuff tendonitis, 324
- S**
- Sciatica, 289
- Scintigraphy, of elbow, 566-567
- Scoliosis, 288
- Second impact syndrome, 421
- Sesamoiditis, orthoses in, 160
- Sesamoids, stress fractures of, 68
- Sever's disease, orthoses in, 163
- Shephard, R.J., 206
- Shin splints, description of, 72
 etiologies of, 72
 treatment of, 72-73
- Shock wave therapy, in plantar fasciitis, 126-127
- Shoes, modification of, for patient diagnoses, 157-158
 in plantar fasciitis, 125
 orthoses and, 157
- Short-term gain versus long-term risk of athlete, 178
- Shoulder, anatomy of, 335-336
 dislocation of, immobilization in, 340
 in external rotation, 341
 natural history of, 342
 and nonoperative versus operative treatment of, 342-343
 reduction of, 339-340
 surgery in, 342-343
 rehabilitation following, 348
 return to play following, 345-349
 without surgery, return to play following, 343-345
 injuries to, in female athletes, 286-287
 instability of, management of, 338-341
 pathology of, 337-338
 return to play following, 335-351

- rotation of, evaluation of, 548-549
- stability of, factors contributing to, 336
- Skin diseases, herpes gladiatorum and, 471-482
- SLAP lesions, rotator cuff injuries and, return to play following, 321-334
 - surgical repair of, 329
 - return to sports after, 329-330
 - treatment of, 328-329
 - types of, 328
- Snapping triceps tendon, 751-753
 - management of, 752-753
- Softball, windmill pitching in, biomechanics of elbow during, 523-524
- Sonotherapy, 298-300
- Spinal canal, stenosis of, 408, 409
 - transient quadriplegia and, 408-410
- Spinal cord, neuropraxia of, 407
- Spinal fusion, for lumbar disc herniation, 374-375
- Spinal stenosis, 375-376
- Spine, lumbar. See *Lumbar spine*.
 - of female athletes, 288-289
- Spirit of rules, 219
- Spleen, enlargement of, in infectious mononucleosis, 486
 - rupture of, avoidance of, in infectious mononucleosis, 490-491
 - in infectious mononucleosis, 489
- Spondylolisthesis, 288-289, 376-377
- Spondylolysis, 288-289
 - lumbar, 367
- Sports, as forum to exercise moral fortitude, 215
 - as microcosm of life, 223
 - classification of, 266
 - competitive, participation in, recommendations for, 270-271
 - medical aspects of, 255-277
- Sports injuries. See *Injury(ies)*, in sports.
- Sports medicine, advertising of, 181
 - ethics of, 175-182
 - history of ethics in, competing demands of sport and health, 195-214
 - informed consent in, 183-193
- Sports medicine care, cost of, 180
- Sprain(s), 95-120
- Spur, of radial head, 567
- Staphylococcus*, 479, 480
- Staphylococcus aureus*, methicillin-resistant, 481
- Steroid injections, in plantar fasciitis, 127-128
- Strength training, following ankle injuries, 88
- Streptococcus*, 479, 480
- Stress fracture(s), biomechanical factors
 - predisposing to, 63-64
 - definition of, 62
 - development of, 63
 - history taking in, 64
 - imaging studies in, 64-65
 - in female athletes, 288
 - of olecranon, anatomy and biomechanics of elbow and, 668-670
 - evaluation of, 670-672
 - treatment of, 672-673
 - risk factors for, 63
 - site of, as sport-related, 63
- Stress injury, of olecranon, valgus extension overload syndrome and, 665-676
- Subtalar arthroscopy, advantage of, 36-37
 - anatomy and portals for, 37-38, 39
 - equipment for, 40
 - examination for, 39
 - postoperative care and rehabilitation in, 40
 - results of, 40-41
 - technique of, 38-40
- Subtalar joint, anatomy of, 95-96
 - injury(ies) of, 95-103
 - return to play following, 102-103
 - instability of, Broden's view of, 97-99
 - clinical diagnosis of, 97
 - imaging in, 97-100
 - magnetic resonance imaging in, 100
 - mechanisms of injury in, 96-97
 - modified Brostrom procedure in, 100-102
 - stress radiography in, 99
 - treatment of, 100-102
- Sudden death, in athletes, 455-456
 - cardiovascular causes of, 456-465
 - in hypertrophic cardiomyopathy, risk factors for, 458
- Superior labrum anterior posterior lesions. See *SLAP lesions*.
- Syndesmosis, tibiofibular, 23
- Syndesmosis injuries, 23-24
- Synostosis, radio-ulnar, 747-749
 - surgery in, 748-749
 - types of, 748
- Synovial chondromatosis, 754
 - treatment of, 755

T

- Talar tilt test, in chronic lateral instability of ankle, 10
- Talocalcaneal ligament, 1
- Talofibular ligament, anterior, 1-2
injury of, 45
posterior, 1
- Talus, osteochondral lesions of, 21-23
microfracture technique in, 44-45
osteochondral autologous transfer system and mosaicplasty, 45
overuse syndromes and, 44
treatment of, 44
stress fractures of, 66
- Tarsometatarsal joint(s). See *Lisfranc joint*.
- Team physician(s), advertising and marketing of, 235-237
as part of team, 176
-athlete relationship, informed consent and, 188-191
of professional team. See *Professional team physician*.
Olympic, in early 20th century, 206
sharing of information and, 177
use of illicit drugs and, 179-180
- Technetium-99m methoxyisobutyl isonitrile perfusion imaging, in exertional compartment syndrome, 71
- Tendinitis, Achilles, 56
flexor-pronator, nonoperative rehabilitation in, 783-785
inflammatory, 56
- Tendinopathy(ies), of foot and ankle, 54-62
clinical management of, 56
histopathology of, 54-62
peroneal, 61-62
- Tendinosis, biceps, and cubital bursitis, 576
description of, 55
paratenonitis with, 56
- Tendonitis, rotator cuff, 324
- Tendon(s), spontaneous rupture of, 55-56
tibial. See *Tibial tendon*.
- Tennis, biomechanics of elbow during, 524-525
- Tennis elbow. See *Epicondylitis, lateral*.
- Therapeutic modality, rehabilitation of injured athlete, 297-311
- Thrower(s), adolescent, thrower's elbow in, 562
anterior interosseous syndrome in, 733
skeletally immature, 533-537
biomechanics and elbow injuries in, 537-539
young, biomechanics and development of elbow in, 531-544
- Thrower's elbow, aggravating or alleviating factors in, 555
assessment of resting position of elbow in, 556
causes of, 551
compression neuropathies in, 721, 722
duration of symptoms of, 553-554
history taking and examination in, 553-566
in adolescent thrower, 562
location of pain in, 554
"milking maneuver" in, 560-561
nonoperative rehabilitation guidelines for, 783-791
palpation in, 557-558
physical examination in, 556-562
presence of palmaris longus tendon and, 561, 562
previous treatment of throwing arm and, 555
pseudovalgus instability in, 561
range of motion determinations in, 556-557
rehabilitation of, 765-801
advanced strengthening phase of, 777-779
general guidelines for, 767-783
immediate motion phase of, 767-769
intermediate phase of, 769-777
interval throwing program in, 784
return-to-activity phase of, 779-783
symptoms associated with, 547, 554
team/season concerns in, 555-556
time of onset of, 553-554
valgus extension overload test in, 561
valgus instability test in, 559, 560
valgus stress testing in, 559
- Thrower's ten program, 770-775
- Throwing, biomechanics of, 531-533, 552-553
improper, prevention of, 539
- Throwing program, interval, for baseball players, 780-783
- Tibia, anterior cortex of, stress fractures of, 65-66
medial, stress fractures of, 65
- Tibial tendinitis, posterior, orthoses in, 161
- Tibial tendon, posterior, dysfunction of, 60-61
diagnosis of, 61
etiologies of, 61
histopathology of, 60-61

- magnetic resonance imaging
 - in, 61
 - stages of, 60
 - treatment of, 61
 - Tibiofibular syndesmosis, 23
 - Tinea capitis, 478-479
 - Tinea corporis, 478
 - Tinea pedis, 478-479
 - Toe, great. See *Great toe*.
 - Triceps tendon, and biceps tendon, injuries of, 707-722
 - rupture of, in contact sports, 361-362
 - rehabilitation protocol in, 362
 - ruptures of, 715-717
 - clinical presentation and diagnosis of, 716
 - mechanism of injury in, 715
 - treatment of, 716-717
 - snapping syndrome of, 751-753
 - management of, 752-753
 - Turf toe, 112
 - clinical diagnosis of, 115
 - imaging in, 115, 116, 117
 - mechanism of injury in, 114
 - orthoses in, 158-159
 - return to play following, 116-117
 - risk factors for, 115
 - treatment of, 116
 - Tyson, Mike, 215
-
- ## U
-
- Ullrich, Jan, 217
 - Ulnar collateral ligament, biomechanical forces on, 642-643
 - function of, 357
 - functional anatomy and biomechanics of, 642-643
 - injury to, 589-591
 - diagnosis of, arthroscopy in, 654
 - history taking in, 647-648
 - imaging studies in, 652-654
 - physical examination in, 648-652
 - in overhead athlete, 643-663
 - in valgus stress to elbow, 643-644
 - nonoperative rehabilitation in, 788-790
 - pathophysiology of, 643-647
 - lateral, reconstruction of, 634-638
 - postoperative care following, 638
 - results of, 639
 - reconstruction of, rehabilitation following, 794-797
 - return to play following, 358
 - tears of, 356-358
 - in sports, 356-357
 - surgical management of, 357-358, 654-658
 - Ulnar collateral ligament complex, 642
 - sprains in, conservative treatment following, 789-790
 - Ulnar nerve, compression of, 725-726
 - dislocation of, in ulnar neuritis, 568, 569, 575
 - injuries of, 727-730
 - evaluation of, 728-729
 - treatment of, 729-730
 - pressures on, in repetitive throwing, 646
 - transposition of, 359-360
 - rehabilitation following, 791-793
 - with elbow flexion, 725
 - Ulnar neuritis, 575
 - dislocation of ulnar nerve in, 568, 569
 - ulnar nerve dislocation in, 575
 - Ulnar neuropathy, nonoperative rehabilitation in, 785-787
 - Ultrasound, in Achilles tendon disorders, 58
 - of elbow, 568-571
 - Upper extremities, injuries to, in female athletes, 286-288
-
- ## V
-
- Valgus extension overload, 354-356
 - anatomy and biomechanics of elbow and, 663-665
 - and stress injury of olecranon, 665-676
 - mechanism of, 521
 - nonoperative rehabilitation in, 787-788
 - patient evaluation in, 665, 666
 - treatment of, 665-668
 - results of, 668
 - Valgus stress, milking maneuver to produce, 650-651
 - to elbow, injury to ulnar collateral ligament in, 643-644
 - Valgus stress test, 649
 - Values, external, of sports, 221
 - internal, of sports, 221
 - Valvular heart disease, 463
 - Ventricular dysplasia, arrhythmogenic right, 458
 - diagnosis of, 459-460

Ventricular tachycardia, idiopathic, 464

Vertinsky, Patricia, 205

W

Weightbearing exercise, 292

Whorton, James, 205

Wobble board training, following ankle injury, 89

Wolff-Parkinson-White syndrome, 464

Wooden, John, 220-221, 223, 224

World Medical Assembly, at Budapest in 1993, ethical guidelines and, 183

Wrestling, herpes gladiatorum associated with. See *Herpes gladiatorum*.

Wrist, median nerve entrapment in, 724

Y

Yates, Sean, 217

Yuspeh, Alan R., 244-245



